

WHAT IS CLAIMED IS:

1. A magnetic disk apparatus comprising:
  - a magnetic disk for storing thereinto information;
  - a head equipped with a recording conversion element for writing information into said magnetic disk and a reproducing conversion element for reading information from the magnetic head;
  - an actuator arranged by a suspension for supporting said head so as to move the head on the magnetic disk, and also a drive apparatus for driving said suspension; and
  - a stopper for limiting a movable range of said actuator; wherein:
    - said stopper is formed by an elastic member; and
    - an elastic deformation amount of said stopper is changed by changing force of driving said actuator under such a condition that said actuator is depressed against said stopper in order that the position of said head is adjusted, and a positional dependent characteristic along a radial direction of the magnetic disk as to a reproduction output of said head is measured.
2. A magnetic head apparatus as claimed in claim 1 wherein:
  - a pattern used to measure said positional dependent characteristic of the reproduction output is recorded on an innermost peripheral region on said

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magnetic disk, where said head is positioned under such a condition that said actuator is depressed against said stopper so as to be deformed.

3. A magnetic head apparatus as claimed in claim 1 wherein:

    said positional dependent characteristic measuring operation is carried out, while said head is moved along one direction.

4. A magnetic head apparatus as claimed in claim 1 wherein:

    a relationship between a magnitude of drive force capable of depressing said actuator against said stopper and a position of the head along a width direction thereof is defined by that a variation of gradients is limited to 10 % within a range of two tracks of the magnetic disk.

5. A method for recording a servo signal on a magnetic disk apparatus comprised of: a magnetic disk for storing thereinto information; a head equipped with a recording conversion element for writing information into said magnetic disk and a reproducing conversion element for reading information from the magnetic head; an actuator arranged by a suspension for supporting said head so as to move the head on the magnetic disk, and also a drive apparatus for driving said suspension; and a stopper for limiting a movable range of said actuator; wherein:

    at such a stage that a servo signal is

recorded on said magnetic head where information used to position said head has not yet been recorded,

an elastic deformation amount of said stopper is changed by varying force of driving said actuator under such a condition that said actuator is depressed against said stopper so as to adjust a position of said head in a fine mode, and also to measure a positional dependent characteristic along a radial direction of the magnetic head as to a reproduction output of said head.

6. A servo signal recording method as claimed in claim 5 wherein:

a pattern used to measure said positional dependent characteristic of the reproduction output is recorded on an innermost peripheral region on said magnetic disk, where said head is positioned under such a condition that said actuator is depressed against said stopper so as to be deformed.

7. A method for recording a servo signal on a magnetic disk apparatus comprised of: a magnetic disk for storing thereinto information; a head equipped with a recording conversion element for writing information into said magnetic disk and a reproducing conversion element for reading information from the magnetic head; an actuator arranged by a suspension for supporting said head so as to move the head on the magnetic disk, and also a drive apparatus for driving said suspension; and a stopper for limiting a movable range of said

actuator; wherein:

at such a stage that a servo signal is recorded on said magnetic head where information used to position said head has not yet been recorded,

an elastic deformation amount of said stopper is changed by varying force of driving said actuator under such a condition that said actuator is depressed against said stopper so as to change a position of said head in a stepwise mode, and also to record patterns having finite lengths which are not overlapped with each other at a plurality of radial positions.

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